annual

report

1982-83

ALBERTA
ELECTRIC
ENERGY
MARKETING
AGENCY

Alberta
UTILITIES AND
TELECOMMUNICATIONS

Office of the Minister

228 Legislature Building, Edmonton, Alberta, Canada T5K 2B6 403/427-3016

Honourable G. Amerongen, Speaker
Legislative Assembly of Alberta
325 Legislative Building
EDMONTON, Alberta
T5K 2B6

Sir:

It is my pleasure to submit the Annual Report of the Electric Energy Marketing Agency for the year ended March 31, 1983.

Respectfully submitted,

Bob Bogle

Bob Bogle, Minister
Utilities and Telecommunications

ALBERTA
ELECTRIC
ENERGY
MARKETING
AGENCY

Office of the Chairman

Room 924, J.J. Bowlen Building, 620 - 7th Ave. S.W., Calgary, Alberta T2P 0Y8. Phone (403) 261-4375

Calgary, Alberta

To the Honourable Bob Bogle
Minister of Utilities and Telecommunications

Sir:

I have the pleasure to submit herewith a report covering the activities of the Electric Energy Marketing Agency for the fiscal year ended March 31, 1983.

Since the 1982/83 fiscal year was the first during which this Agency was in operation, the report covers both the financial transactions and the organizational and operational facets of the Agency.

Respectfully submitted,

D. B. Smith, P.Eng.
Chairman

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ALBERTA ELECTRIC ENERGY MARKETING AGENCY 1983 ANNUAL REPORT

The Alberta Electric Energy Marketing Agency is required annually, by statute, to provide a general report of its operations to its Minister, the Honourable R. J. Bogle, Minister of Utilities & Telecommunications. It is pleased to submit the following.

The Agency began operations on September 1, 1982, and administers the Electric Energy Marketing Act which was proclaimed April 15, 1982, after receiving the required three readings in the Alberta Legislature and Royal Assent. From the time of proclamation to September 1, 1982, a Chairman of the Agency was appointed, staff hired, offices located in Calgary and Edmonton, and operational systems developed and put into place.

The Electric Energy Marketing Agency (EEMA) appears to be unique in North America and possibly in the world. The Agency was formed to alleviate the problems arising from the large electric energy cost differential between consumers in Northern Alberta and Southern Alberta, i.e. those in the Alberta Power Limited franchise area and those in TransAlta Utilities Corporation franchise area, by purchasing the energy at the end of transmission, averaging its cost and reselling it at the average price. Prior to the Marketing Agency, there was an effective difference of approximately 2 cents/kW.h between these franchise areas, with the highest cost to the average consumer occurring in the Alberta Power Limited franchise area.

There was also the desire to encourage the achievement of the highest attainable degree of economic dispatch, recognizing the fragmented ownership of the electric utility systems. Just prior to the Agency becoming operational, the three generating utilities, TransAlta Utilities, Alberta Power and Edmonton Power, set up a control dispatch unit to schedule operation of their generating units on a province-wide basis, rather than each utility dispatching as a single entity. This was a significant step towards achieving maximum economies of operation.

While working towards eliminating cost differentials, the Agency program was also designed to protect the integrity of a long-established regulatory system which is in place in Alberta, anchored by the Public Utilities Board and the Energy Resources Conservation Board.

The Electric Energy Marketing Agency is the largest single purchaser of electric energy in Canada. It essentially purchases and resells all the power generated in Alberta. The total purchases by the Agency are approximately $75 million per month or approximately $900 million per year.

FUNCTIONS AND RESPONSIBILITIES OF THE AGENCY

The Alberta Electric Energy Marketing Act, which governs the Agency, requires it to conduct its power cost averaging operations without making or losing money. The Agency is required to conduct its operations in such a way that the average cost of energy at the pooling interfaces (i.e. at the end of transmission) is minimized as much as practicable.

EEMA may acquire or purchase electric energy produced in the province or outside the province and, in turn, resell the energy. The legislation stipulates that the Agency may act as an agent or broker of electric energy. The Agency sets the price or pricing formula for resale of the electric energy to the utilities. Agreements for short term energy supplies may be entered into by the Agency, and agreements to market electric energy between Alberta and other jurisdictions may be entered into by EEMA.

Regulations relative to the legislation have been made. The utilities which are required to sell electric power to the Agency by regulation are identified as TransAlta Utilities Corporation, Alberta Power Limited and Edmonton Power.

The Act and the Regulations define the three main elements considered in the operations of the Agency. In the Act 'upstream' means closer to a power plant in a power plant/transmission line/electric distribution sequence.

In the Regulations 'downstream' means closer to an electric distribution system in a power plant/transmission line/electric distribution sequence.

Section 2 of the Regulations, pursuant to Section 16 of the Electric Energy Marketing Act, defines where in the sequence the Agency purchases from and resells electric power to the utilities (i.e. at the 'pooling interfaces'), which are the dividing points between 'upstream and downstream'.

The Regulations also govern the conditions under which the Agency may exchange electricity, and the methods to be used in calculating the quantity of electric energy sold.

For the purposes of the Utility Companies Income Tax Rebates Act, the Agency is designated as a wholesale customer of the utilities companies. In Alberta, 95 percent of the federal income tax paid by the utilities companies, and 100 percent of the provincial income tax, is flowed back to the utilities in trust for the benefit of the customers of the utilities. The upstream component of these income taxes, both federal and provincial, are flowed through the Agency and redistributed as a separate item in the pooling calculations; the averaging process is to attain effective uniform average levels of cost at the end of transmission, after considering the effect of income tax rebate.

HISTORY OF THE AGENCY

The Alberta Electric Energy Marketing Agency appears to be unique in its concept. The Agency legislation came about after a series of studies by the then Department of Utilities and Telephones. These studies, which were completed in mid-1981, concluded that the marketing agency, cost pooling concept applied at the end of transmission or 'wholesale level', was the best way to deal with present and future potential cost and rate differential and economic dispatch problems.

During the fall of 1981 legislation was drawn up. First reading of the Act occurred on November 16, 1981, with second reading on December 1, 1981, and third reading on December 2, 1981. During the time between the third reading of the Act and its proclamation on April 15, 1982, a 5-year shielding program was developed and announced. This program shields the utilities which are low cost producers of electric power in Alberta, and allows their customers a limited period to adjust to the slightly higher costs caused to them by cost pooling or averaging at the end of transmission.

There was also considerable work done to make the Agency operational and cause the transition to the new system to proceed smoothly. To facilitate this transition, an implementation committee was formed. This committee consisted of senior officials from the two private generating utilities, TransAlta Utilities and Alberta Power, and the two municipally-owned generating utilities, Edmonton Power, which serves the City of Edmonton, and Medicine Hat Power, which serves the City of Medicine Hat. Other members of the committee were officials from the three major civic distribution utilities, (the City if Calgary, City of Red Deer and the City of Lethbridge), as well as the Energy Resources Conservation Board, the Public Utilities Board and the Alberta Union of Rural Electrification Associations. Practical operating issues of concern to all parties were discussed at the series of meetings held by the committee. As the regulations were being drawn up, they were discussed with the committee to ensure the attainment of a practical, operable system.

Five year forecasts were requested and received from the three utility companies named in the regulations, TransAlta Utilities, Alberta Power and Edmonton Power. These forecasts were analyzed and revisions to the forecasts were made taking into consideration the advice of Alberta Treasury. The revised forecasts formed the basis for prediction of the initial rates into and out of the Agency, the cost averaging and pooling procedures, and the prediction of amount of shielding which would be required for the short term for the benefit of initially adversely-affected customers of the low cost utility.

The City of Medicine Hat, which was part of all the discussions leading up to the formation of the Agency, has refrained from participation. The City of Medicine Hat owns its own natural gas and its own power plant. Such ownership has led it to choose to stay outside of the pooling process.

RELATIONSHIPS WITH REGULATORY AND PLANNING BODIES

The Electric Energy Marketing Agency, because of its statutory responsibilities, expects to appear regularly before the two principal regulatory boards in the province as intervenors in the public hearing process. These Boards are the Public Utilities Board and the Energy Resources Conservation Board. In addition, the Agency is an observing member of the Electric Utility Planning Council.

The Alberta Public Utilities Board (PUB) is a long-established quasi-judicial board in Alberta, primarily responsible for the financial regulation of private investor-owned utilities in the province. Its duties are to determine the rate base and fair rate of return on the utilities' investment and to fix just and reasonable rates based upon these determinations. With the advent of the Agency, electric utility costs must now be divided into 'upstream' and 'downstream' costs for allocation.

The Energy Resources Conservation Board administers the Hydro and Electric Energy Act. The Energy Resources Conservation Board (ERCB) appraises the reserves and production capacities of energy resources in the Province. All applications for generating facilities and transmission lines are subject to approval by the ERCB, after public hearings, followed by approval by Lieutenant-Governor in Council.

The Electric Energy Marketing Agency has observer status on the Steering Committee of the Electric Utility Planning Council. This unique planning body is charged with planning for the future growth of the electric utility industry prior to going through the hearing and regulatory process.

The Alberta Electric Energy Marketing Agency has appeared before the Public Utilities Board as an intervenor and as the major purchaser of wholesale electric power in Alberta. Since late 1982, relevant Public Utilities Board hearings of primary significance to the Agency have occurred regarding a major rate increase requested by TransAlta Utilities and rates charged by the designated generating utilities for the sale of electric energy to EEMA.

In August, 1982, initial rates for electric energy sales to the Alberta Electric Energy Marketing Agency were filed by TransAlta Utilities, Alberta Power and Edmonton Power. The Public Utilities Board approved these initial rates and those were the rates at which EEMA purchased electric power until the three utilities made application in December, 1982, to change the rates at which they sold electric energy to EEMA. The Board established interim rates for sale to EEMA effective January 1, 1983, subject to correction after the public hearing process. In these hearings and a parallel TransAlta Utilities general revenue requirement hearing held by the PUB, the Agency appeared as an intervenor, being the major sole interface purchaser of electricity in Alberta.

Because of its unique position with the electric utility industry in Alberta, the Agency must avoid representing the interests of any particular utility, community or customer group with respect to any other such utilities, community or customer groups. The Agency principle has been at all times to act in a non-adversarial manner in analyzing the positions taken by various segments of the industry and customers and to only oppose positions taken by any particular group before the PUB or ERCB if it considers such positions relatively unfair in the overall, and only by attempting to develop and present or extract all relevant facts before the regulatory authority. It has endeavoured to assist the entire industry in developing the supplementary procedural and allocation guidelines needed because of its presence.

SYSTEM DESCRIPTION

The Alberta electric transmission system is virtually independent. There is no significant connection to the east, and the Alberta system is not synchronized with the Saskatchewan system. Alberta is tied to the western system through a small 50MW connection with British Columbia. It is anticipated this connection will be much stronger as there has been approval of a new high voltage line, approximately 300MW, which will be ready by 1985.

Throughout the province there are a few small pockets of electric generation which are not connected to the Alberta Interconnected System.

The demand expected in 1983 is 4655.5MW and energy supplied in 1983 is expected to be 24452GW.h.[1]

The sources of generation of electric power in the province consist of approximately 9 percent hydro, 77 percent coal and 14 percent gas. Transmission lines throughout the province are made up of approximately:

2400 miles (72 kV)
5200 miles (138 kV)
2100 miles (240 kV)
90 miles (500 kV)

[1]EUPC Forecast released Aug. 3, 1983 dated June 17, 1983.

AGENCY POOLING PROCESS

The Agency is required to use a cost pooling concept which is applied at the end of transmission (the 'wholesale' level) as a way to deal with present and future cost averaging differentials. Its resale rate structure is designed to encourage attainment of the highest degree of economic dispatch. Since the Agency began operations on September 1, 1982, it has become probably the largest purchaser of electric energy in Canada (Figure 1). For the seven months September 1, 1982, to March 31, 1983, EEMA's total purchases were $449,627,682 (see Table 1).

TABLE 1

ALBERTA ELECTRIC ENERGY MARKETING AGENCY
PURCHASE OF ELECTRIC ENERGY FROM UTILITIES
FOR THE YEAR ENDED MARCH 31, 1983
(NET AFTER INCOME TAX REBATE)

	Alberta Power Limited	Edmonton Power	TransAlta Utilities	Total Purchase
September '82	$ 12,848,223	$ 15,387,757	$ 27,131,653	$ 55,367,633
October '82	12,901,089	15,677,411	27,343,890	55,922,390
November '82	13,101,784	16,200,518	27,688,169	56,990,471
December '82	13,596,179	16,650,131	27,916,445	58,162,755
January '83	16,713,677	16,567,868	42,059,606	75,341,151
February '83	16,272,860	15,524,518	41,467,450	73,264,828
March '83	16,402,444	16,072,973	42,103,037	74,578,454
TOTAL	$101,836,256	$112,081,176	$235,710,250	$449,627,682

Energy purchased and sold to the three generating utilities by month is shown in Table 2.

TABLE 2

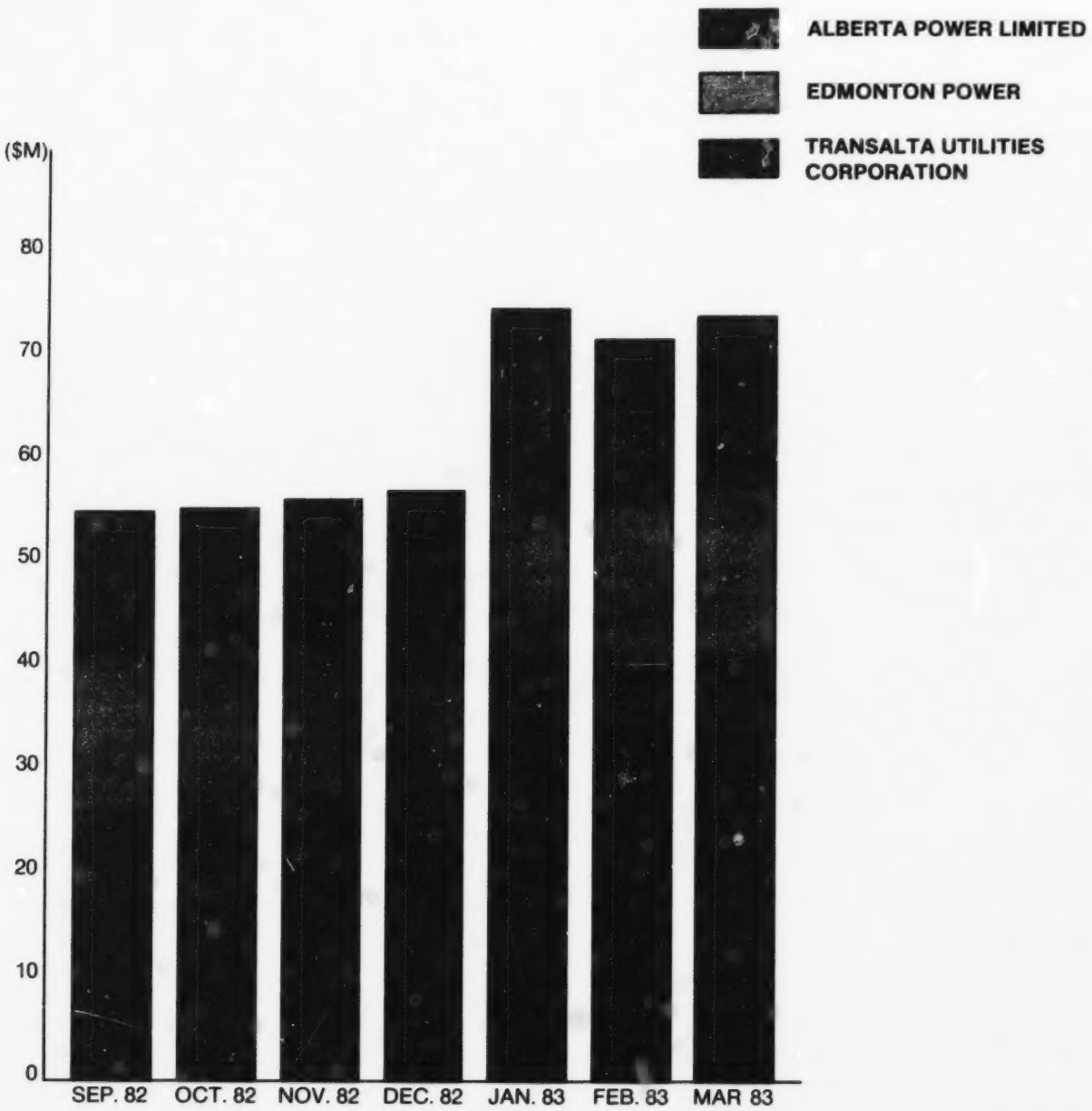
ALBERTA ELECTRIC ENERGY MARKETING AGENCY
ENERGY PURCHASED FROM AND RESOLD TO UTILITIES
FOR THE YEAR ENDED MARCH 31, 1983

(in GW.h)

	Alberta Power Limited	Edmonton Power	TransAlta Utilities	Total
September '82	253.7	379.8	1,161.1	1,794.6
October '82	259.1	393.2	1,218.0	1,870.3
November '82	279.6	417.4	1,310.3	2,007.3
December '82	330.1	438.2	1,371.5	2,139.8
January '83	336.1	435.3	1,361.8	2,133.2
February '83	298.0	386.6	1,235.0	1,919.6
March '83	309.2	412.2	1,371.1	2,092.5
TOTAL	2,065.8	2,862.7	9,028.8	13,957.3

FIGURE 1

PURCHASE OF ELECTRIC ENERGY BY EEMA FROM UTILITIES BY MONTH



EEMA purchases all the energy generated by TransAlta Utilities Corporation, Alberta Power Limited and Edmonton Power at the end of transmission at rates approved by the Public Utilities Board. The Agency then averages or pools the costs of such energy, and resells the electric energy on an averaged pricing basis to the aforementioned utilities at the same pooling points at which the energy was purchased. Effective net 'transfer' payments between the utilities are the result (See Table 3). As a consequence of this process, there has been a significant step toward the equalization of average retail rates to customers while preserving the integrity of the several components of the utilities industry in the province.

TABLE 3

TRANSFER PAYMENT TO UTILITY COMPANIES
SEPTEMBER '82 TO MARCH '83

	Alberta Power Limited	Edmonton Power	TOTAL
September '82	$ 4,945,553	$ 3,211,819	$ 8,157,372
October '82	4,964,155	3,405,897	8,370,052
November '82	5,063,767	3,835,247	8,899,014
December '82	5,073,267	4,111,404	9,184,671
January '83	5,648,225	285,431	5,933,656
February '83	5,575,072	0	5,575,072
March '83	5,641,341	79,176	5,720,517
TOTAL	$36,911,380	$14,928,974	$51,840,354

TABLE 4

SHIELDING TO UTILITY COMPANIES
SEPTEMBER '82 TO MARCH '83

	Edmonton Power	TransAlta Utilities	TOTAL
September '82	$ 0	$ 8,157,372	$ 8,157,372
October '82	0	8,370,052	8,370,052
November '82	0	8,899,014	8,899,014
December '82	0	9,184,671	9,184,671
January '83	0	5,933,656	5,933,656
February '83	287,619	5,287,453	5,575,072
March '83	0	5,720,517	5,720,517
TOTAL	$ 287,619	$51,552,735	$51,840,354

In this averaging procedure the low cost producer, TranAlta Utilities, is incurring a rise in its 'upstream' costs to the provincial average. Conversely, the higher cost producers, Edmonton Power and Alberta Power, have had their costs lowered to the provincial average. To allow customers of TransAlta Utilities to gradually accommodate to the moderately higher costs resulting from pooling, a limited term government shielding program has been implemented (see Table 4). During the first year of Agency operation, TransAlta Utilities customers have been fully shielded from extra costs which would have flowed to them. During the subsequent four years, starting on September 1, 1983, they will be shielded on a steadily decreasing basis until about mid-1987 when the shielding program will end.

Figures 2 and 3 graphically describe the magnitude of transfer payments received by Alberta Power and Edmonton Power. Alberta Power has received $36,911,380 since September 1, 1982, and Edmonton Power has received $14,928,974 in the same period of time.

The actual level of shielding payments during any period depends not only upon the specified shielding percentage (100 per cent in the first year) but upon actual levels of utility energy sales and the basic utility costs upon which their P.U.B.-approved upstream rates are designed.

FIGURE 2

NET TRANSFER MOVEMENTS TO UTILITIES BY MONTH

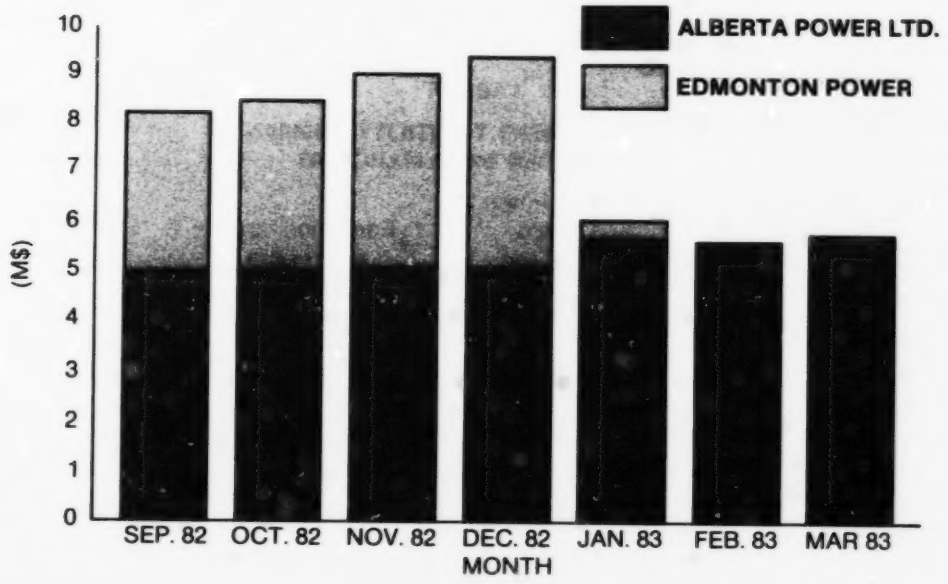
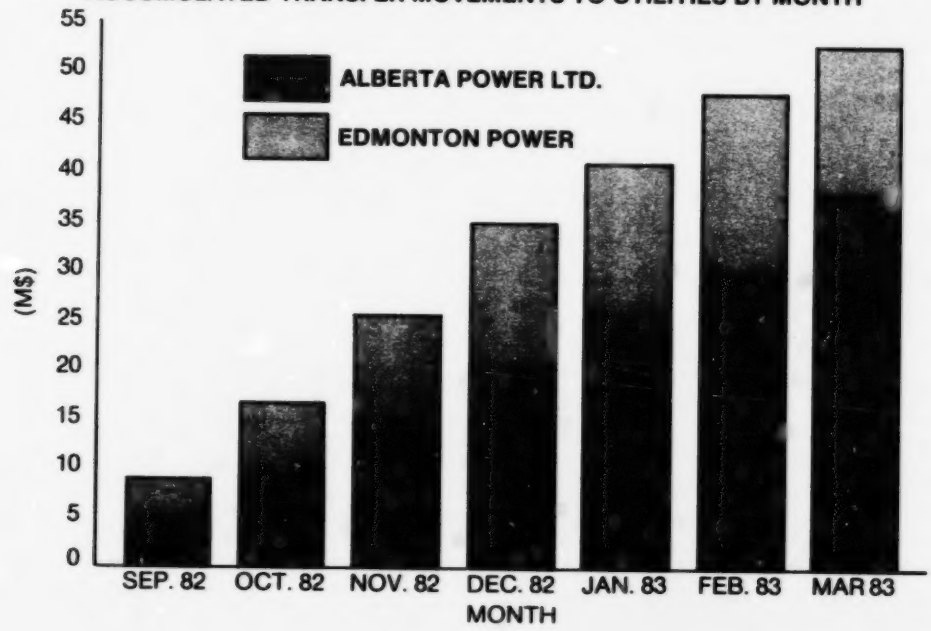


FIGURE 3

ACCUMULATED TRANSFER MOVEMENTS TO UTILITIES BY MONTH



ACHIEVEMENTS OF THE AGENCY

The primary goal of the Agency is to achieve essentially equalized average wholesale power costs across the several utility service areas in Alberta. This goal has been achieved. Customers of Alberta Power Limited have benefited from the pooling process by an approximate 30 percent across the board reduction in their electric power rates. Alberta Power Limited customers are paying about 2 cents/kW.h less than they were prior to September 1, 1982.

Edmonton Power has benefited, although less in total than Alberta Power Limited. Although not through the Agency program, as of September 1, 1982, natural gas use over 1 Bcf for power generation is not covered by the Natural Gas Price Protection Plan. However, the impact of this reduction has been more than offset by the cost-pooling benefits accruing to it to date from the Agency pooling program.

Wholesale power costs in the TransAlta service area will start to rise to the provincial average as of September 1, 1983, as shielding is gradually removed.

EEMA has had essentially no financial impact on the utilities, as they are still able to recover their costs in the same manner as prior to the inception of the Agency. There may be other efficiencies achieved in the future through the utilities companies improvements in economic dispatch, and long term planning being facilitated by lower capacity requirements as a result of improved load factor.

The Marketing Agency, through its appearances as an intervenor, will have an effect on the regulatory system in Alberta. With the advent of the Agency, there is an extra step in the determination of rates. Prior to EEMA, individual rates were set to cover revenue requirements. Since EEMA, total revenue requirements must be determined and split into upstream and downstream requirements.

However, the number of intervenors has increased because the upstream costs of one utility influence retail rates of others as well. Utilities themselves are now interested parties and are intervenors when applications of other utilities are heard. Since September 1, 1982, the upstream portion of Edmonton Power has been subject to regulation by the Public Utilities Board and its upstream costs are part of the pool.

AGENCY STUDIES

The Alberta Electric Energy Marketing Agency, in addition to its appearances before the two major regulatory bodies in the Province, is required to conduct its operations in such a way that the cost of electric energy in Alberta at the pooling interfaces is kept at the minimum predictable level. To ensure that the climate exists to do this, the Agency has embarked on a number of monitoring projects. A major project presently underway is a study of wholesale power rates in Alberta. The major objective of this study is to examine and assess the impact of EEMA's existing pricing policy for wholesale power in Alberta in terms of the effect on existing utility operations. Study objectives include identifying alternative wholesale pricing methods which EEMA could adopt, doing comparative quantitative assessments of these alternatives and assessing, in a subjective manner, the implications of alternative wholesale pricing systems on the utilities and on their ultimate customers.

Other internal studies in progress include the subjects of cogeneration and alternative energy sources, depreciation and a financial model which will assist the Agency in forecasting changes in rate base, and consequent rates dependent on current and anticipated economic changes.

STAFF OF THE AGENCY

The moderate costs of the Electric Energy Marketing Agency are not included in the pooled cost of electric energy. Instead, these costs are budgeted and provided separately through the Department of Utilities and Telecommunications.

The staff of the Agency is small and is forecast to remain small. There are two offices located in Calgary and Edmonton. The staff complement is made up of three people in Calgary and four in Edmonton.

Calgary Office

Location: 924 J. J. Bowlen Building
620 - 7 Avenue S.W.
Calgary, Alberta T2P 0Y8
(403) 297-4375

Staff: David B. Smith, Chairman
W. C. (Bill) Gillespie, Director
Doreen M. McMullen, Secretary

Edmonton Office

Location: 700 Princeton Place
10339 - 124 Street
Edmonton, Alberta T5N 3W1
(403) 422-1722

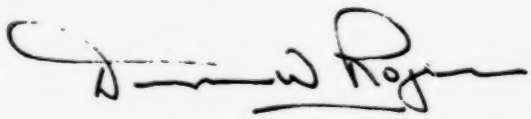
Staff: G. A. (Greg) Fernet, Director
Murray Smith, Business Analyst
Francis Lau, Accounting Supervisor
Marilyn Mackie, Secretary

AUDITOR'S REPORT

To the Minister of Utilities
and Telecommunications

I have examined the balance sheet of the Alberta Electric Energy Marketing Agency as at March 31, 1983 and the statement of revenue and expenditure for the period then ended. My examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as I considered necessary in the circumstances.

In my opinion, these finanacial statements present fairly the financial position of the Agency as at March 31, 1983 and the results of its operations for the period then ended in accordance with the disclosed basis of accounting, considered appropriate in the circumstances, as described in Note 2 to the financial statements.



C.A.
Auditor General

Edmonton, Alberta
July 13, 1983

Statement A

ALBERTA ELECTRIC ENERGY MARKETING AGENCY
BALANCE SHEET
AS AT MARCH 31, 1983

ASSETS

Current:	
Deposits in trust (Note 3)	$2,098,470
Accounts receivable	406,918
	2,505,388
Fixed:	
Equipment, at cost	17,187
	$2,522,575

LIABILITIES

Current:	
Accounts payable	$ 27,889
Capital surplus arising from equipment provided from operating expenses	17,187
Due to the Province of Alberta	2,477,499
	$2,522,575

The accompanying notes are part of these financial statements.

Statement B

ALBERTA ELECTRIC ENERGY MARKETING AGENCY
STATEMENT OF REVENUE AND EXPENDITURE
FOR THE PERIOD ENDED MARCH 31, 1983

REVENUE

Sales of electric energy	$449,627,682

EXPENDITURE

Purchases of electric energy	$449,627,682
Shielding grants	51,840,354
Operating expenses, Schedule 1	309,097
	501,777,133
Excess of expenditure over revenue	52,149,451
Contribution by the Province of Alberta	52,149,451
	$ —

ALBERTA ELECTRIC ENERGY MARKETING AGENCY
NOTES TO THE FINANCIAL STATEMENTS
MARCH 31, 1983

Note 1 **Authority**

The Alberta Electric Energy Marketing Agency operates under the authority of the Electric Energy Marketing Act, Chapter E-4.1, Statutes of Alberta 1981. The Act was proclaimed in force on April 15, 1982. Purchase and sale of electric energy, and payment of shielding grants commenced on September 1, 1982. Shielding grants are paid pursuant to the Department of Utilities and Telephones Act, Chapter D-31, Revised Statutes of Alberta 1980.

Note 2 **Significant Accounting Policies**

General:

These financial statements have been prepared in accordance with generally accepted accounting principles except that the cost of equipment is charged to operations in the year of acquisition. Equipment is shown in the balance sheet at cost, with an offsetting credit to capital surplus.

Administration Expenses:

The cost of office accommodation and certain other administration expenses are provided from the General Revenue Fund of the Province of Alberta, and accordingly are not reflected in these financial statements.

Changes in Financial Position:

A statement of changes in financial position is not provided as disclosure in these financial statements is considered to be adequate.

Note 3 **Deposits in Trust**

Deposits in trust consist of deposits in the Consolidated Cash Investment Trust Fund of the Province of Alberta. Interest of $126,942 earned on Deposits in Trust has been credited to the General Revenue Fund of the Province of Alberta.

Note 4 **Approval of Financial Statements**

These financial statements were approved by management on July 13, 1983.

Schedule 1

ALBERTA ELECTRIC ENERGY MARKETING AGENCY
SCHEDULE OF OPERATING EXPENSES
FOR THE PERIOD ENDED MARCH 31, 1983

Salaries and wages	$179,458
Legal and consulting services	53,349
Travel and hospitality	23,839
Employee benefits	18,778
Equipment	17,187
Printing, stationery and supplies	10,024
Equipment rental	4,773
Books and periodicals	1,176
Freight, postage and telephone	513
	$309,097

POOR

QUALITY

ORIGINAL